



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

003833

MAY 31 1984

MEMORANDUM

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: 4581-EUP-GO. Application for an experimental use permit to ship and use TD-1123 (potassium salt of 3,4-dichloro-5-oxythiazolecarboxylic acid) in cotton. TOX Chemical No. 309BB.

TO: Mr. Robert Taylor, PM #25  
Fungicide Herbicide Branch  
Registration Division (TS-767)

THRU: Robert B. Jaeger, Section Head *RMJ 5/16/84*  
Review Section No. 1  
Toxicology Branch/HED (TS-769)

FROM: Carlos A. Rodriguez *car 5/16/84* *WLB 5/31/84*  
Review Section #1  
Toxicology Branch/HED (TS-769)

Registrant: Pennwalt Corporation  
Agchem Division  
Three Parkway  
Philadelphia, PA. 19102

Recommendation(s):

The acute toxicity studies for the formulated product (TD-1123 Liquid) have been reviewed and are consistent with the precautionary statements appearing on the product label.

The acute studies on the technical material will not be required at this time for the experimental use permit requested. However, these studies and additional toxicity studies may be required for additional uses or permanent tolerances.

Add, under "Directions For Use", the statement: "Do not use treated cotton for human food or animal feed".

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Other considerations permitting TOX Branch has no objection to granting the requested experimental use permit.

Formulation of TD-1123 Liquid

Active Ingredient

Potassium 3,4-dichloro-5-isothiazolecarboxylate-----35.10\*

Inert Ingredients\*\*-----64.90  
Total 100.00

\* 29.21% 3,4-dichloro-5-isothiazolecarboxylic acid equivalent to 3 lbs. per gallon.

\*\* The inert ingredients in this formulation have been cleared under 40 CFR § 180.1001 (c).

Supporting toxicity data (Reviewer, W. Greer, 6/15/76)

Acute Oral LD<sub>50</sub> (male rats) = 4.3 g/kg (formulated product TD-1123)

Acute Oral LD<sub>50</sub> (male rats) = 1.5 g/kg (formulated product TD-1123)

Acute Oral LD<sub>50</sub> (male and female rats) = 3.4 g/kg (formulated product TD-1123)

Acute Dermal LD<sub>50</sub> (male and female rabbits) = > 2.0 g/kg (formulated product TD-1123)

Acute Inhalation LC<sub>50</sub> (male and female rats) = > 22.85 mg/L (Formulated product TD-1123)

Eye Irritation (rabbits) - Unwashed eyes - intense pain and miosis. Clouded cornea lasting less than three days. Congestion of the iris and conjunctival chemosis persisted for more than 7 days, but reaction appeared to be reversible. Washed eyes - no miosis. Irritant reaction similar to unwashed eyes, except for absence of corneal clouding. (Formulated Product TD-1123).

Skin Irritation (rabbit) - slight skin irritation to intact and abraded skin (Formulated Product TD-1123).

Mutagenicity Evaluation of TD-1123 NB 4689-26-2 submitted with this application.

Ames Salmonella/Mammalian Microsome Mutagenicity Assay  
Activity with TD-1123 NB 4689-26-2, (Cannon Labs, Inc., 4/20/77).

The test material TD-1123 was evaluated for genetic activity in microbial assays with and without the addition of mammalian metabolic activation preparations.

Salmonella typhimurium, strains TA 1535, TA 1537, TA 1538, TA 98, TA 100 and Saccharomyces cerevisiae, strain: D4 were used.

The S-9 rat liver homogenate (Aroclor 1254 induced) was prepared from Sprague-Dawley adult male rat liver.

Positive control chemicals used in the nonactivation and activation assays:

<u>Assay</u>	<u>Chemical</u>	<u>Solvent</u>
Nonactivation	Methylnitrosoguanidine (MNNG)	Water and Saline
	2-Nitrofluorene (NF)	DMSO*
	Quinacrine mustard (QM)	Water and Saline
Activation	2-Anthramine (ANTH)	DMSO*
	2-Acetylaminofluorene (AAF)	DMSO*
	8-Aminoquinoline (AMQ)	DMSO*

\*Dimethylsulfoxide previously shown to be nonmutagenic.

Plate Test:

The test compound was tested with each indicator strain of bacteria with and without S-9 rat liver enzyme extract. The dose ranged from 0.001 ul to 5 ul per plate. The plates were incubated for 48 hrs. at 37°C.

Results:

The compound was slightly toxic to the strain TA-1537 and TA-1538 at 5.0 ul per plate.

The test compound failed to induce any significant changes in the reversion frequency with or without the addition of metabolic activation preparation.

The strain specific controls gave the expected positive responses.

Conclusions:

The test compound is not considered mutagenic under these test conditions, however, the study should specify whether there were replicated trials and whether there were triplicate plates per dose.

Classification - Not acceptable.

TS-769:RODRIGUEZ:s11:X73710:5/15/84

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